

REMARKS

Applicants thank the Examiner for the careful consideration given to this application and for the interview held on March 16, 2010 (summarized below). Reconsideration is now respectfully requested in view of the amendments above and the following remarks.

Claims 43-69 are pending in this application. Claims 47, 57, and 64 are independent claims. Claims 47, 52, 57, 64-66, and 68 are amended. Claims 1-42 were previously cancelled without prejudice or disclaimer. Reconsideration and allowance of the present application are respectfully requested.

Entry of Amendment After Final Rejection

Entry of the Amendment is requested under 37 C.F.R. § 1.116 because the Amendment: a) places the application in condition for allowance for the reasons discussed herein; b) does not present any additional claims without canceling the corresponding number of final rejected claims; and/or c) places the application in better form for an appeal, if an appeal is necessary. Entry of the Amendment is thus respectfully requested.

Summary of Examiner Interview of March 16, 2010

Applicants thank the Examiner for the (telephone) interview conducted on March 16, 2010. This interview was conducted between Examiner Jeffrey Popham and Applicants' undersigned representative. The first topic of discussion was the rejection of claims under 35 U.S.C. § 101, and various proposals for amendments were discussed. The second topic of discussion was the possible allowability of Claims 47 and 57 (and any claims including similar elements) over the combination of references used in the rejections under 35 U.S.C. § 103. Applicants' position is that the combination of references used in the Office Action fails to cover the element recited in these claims; the Examiner clarified his position regarding the combined teachings of the cited references. No agreement was reached, but Applicant's representative did agree to review the arguments for allowability of these claims. Finally, Applicants' representative mentioned a further potential argument with respect to the rejections under 35 U.S.C. § 103; because this argument had been discovered between the time the interview was

arranged and the time of the interview, the Examiner was unable to comment on this argument. Applicants' representative agreed that, if this argument were to be used, it would be explained in further detail in a written response.

Claim Rejections under 35 U.S.C. §101

Claims 64 and 67-69 stand rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. This rejection is respectfully traversed.

Applicants disagree with this rejection; however, to expedite prosecution, Applicants have amended Claim 64 to recite, "at least one ~~communicative coupling to couple the synthesis system to an~~ item selected from the group consisting of a memory device, a playback device, and means for coupling to a communication network" (revisions shown from above). It is respectfully submitted that this amendment is supported in the specification at least in Fig. 1 and at paragraphs 50-52 (of the application as filed; paragraphs 56-58 of the corresponding published application). Claims 65 and 66 have been amended to make their language consistent with the amendment to Claim 64, from which they depend. Applicants respectfully submit that this clearly establishes that the apparatus of Claim 64 includes at least one physical component, and thus addresses the rejection as stated in the Office Action.

Therefore, Applicants respectfully request that the rejections of Claims 64 and 67-69 under 35 U.S.C. § 101 be withdrawn.

Claim Rejections Under 35 U.S.C. §103

Claims 43-47, 49, 53, 56, 57, 63-66, and 69 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,953,506 to Kalra et al. (hereinafter "Kalra") in view of U.S. Patent No. 6,937,730 to Buxton (hereinafter "Buxton"). This rejection is respectfully traversed, for at least the following reasons.

Independent Claim 43 recites, among other things, "modifying an original audio stream having audio information encoded into audio blocks that include one or more encoded values into a modified stream and complementary information, wherein a format of the modified stream corresponds to a format of the original audio stream, wherein the modified stream is distorted with respect to the original audio stream by modifying at least one encoded value of an audio

block of the original audio stream.” Independent Claims 56 and 64 have different scopes but contain similar elements (as do amended Claims 47 and 57, which have been amended to incorporate the elements of Claims 43 and 56, respectively). The Office Action, e.g., at page 4, states:

Kalra discloses a method of transmitting audio information, the method comprising:

Modifying an original audio stream having audio information encoded into encoded values into a modified stream and complementary information, wherein a format of the modified stream corresponds to a format of the original audio stream, wherein the modified stream is distorted with respect to the original audio stream by modifying at least one encoded value of an audio block of the original audio stream, and wherein the complementary information provides information to permit a decoder to reconstitute the original audio stream from the modified stream (Abstract; Column 1, line 66 to Column 2, line 49; Column 3, line 66 to Column 4, line 32; and Column 5, lines 25-29; converting the original stream into a base stream and additive streams for scalable media delivery, for example)[.]

Office Action at 4. The cited sections of Kalra, indeed, address the conversion of an “original stream into a base stream and additive streams for scalable media delivery,” as stated in the Office Action. However, these sections are silent as to the format of the resulting base stream (and additive streams). In order to understand the format of the base stream, which the Office Action is equating with the claimed “modified stream,” it is necessary to consider further portions of Kalra.

In particular, the formation of the base and additive streams is addressed in Kalra in Figs. 5 ff. and in their associated description, at cols. 5 ff. (beginning in col. 5 after the portion cited in the Office Action). These figures and descriptions make it clear that the format of the original stream is *not* preserved in the base stream. For example, col. 9, lines 26-28 state, “After step 154, step 156 occurs and an adaptive stream slice start code is written which is derived from an MPEG slice start code.” Another example is also found at col. 9, lines 38-39: “At the end of the slice, step 162 follows and a memory allocation for a write correction code is inserted.” These are merely a few examples; others may be found in Kalra. In other words, the transcoding process described in Kalra, which is used to generate the base stream, *modifies* the format from the format of the base

stream, at least to insert further information. Therefore, Kalra fails to disclose, and actually teaches away from the claim element, “wherein a format of the modified stream corresponds to a format of the original audio stream.”

Applicants further submit that Kalra fails to disclose or suggest the claim element, “wherein the modified stream is distorted with respect to the original audio stream by modifying at least one encoded value of an audio block of the original audio stream.” As described at cols. 5 ff., the base stream, which the Office Action equates with the “modified stream” of the claims, is formed by taking a subset of the coefficient values of the original stream, not by “modifying at least one encoded value” of the original stream. Hence, Kalra fails in this further respect.

Applicants have reviewed Buxton and have not found any teachings or suggestions to remedy these shortcomings of Kalra. Hence, it is respectfully submitted that the cited references do not support rejections of Claims 43-47, 49, 53, 56, 57, 63-66, and 69 under 35 U.S.C. § 103 for at least these reasons.

Additionally, Claims 47 and 57 have now been amended to be independent claims, and Claim 57 has also been amended to also incorporate elements similar to those recited in Claim 47. Using Claim 47 as an example, Claim 47 includes:

transmitting at least a subset of the complementary information to the target equipment, wherein transmitting at least a subset of the complementary information to the target equipment comprises:

accessing a data profile of the target equipment, wherein the data profile includes an indication of rights of a user to access content of the original audio stream; and

determining, based on the data profile, the subset of the complementary information to be transmitted to the target equipment.

Again, Claims 57, as amended, includes similar elements. At page 7, the Office Action states, in connection with Claim 47:

Kalra as modified by Buxton discloses the method of claim 44, in addition, Buxton discloses that accessing a data profile includes accessing a data profile that includes an indication of rights of a user to access content of the original audio stream (Column 3, lines 21-50; Column 5, line 17 to Column 6, line 43; and

Column 8, lines 23-47; showing different ways of transmitting the data dependent on characteristics of the receiver, authenticated user identification, and whether the channel is trusted or not (the combination of which defines the profile of the device, user, and channel). The distributor may only send CAMA data (content after mask applied), which corresponds to the modified stream or CAMA data along with an encrypted mask content and knowledge of how to reverse the masking, for example, depending on the profile of the user/device).

Office Action at 7. In other words, the Office Action is understood as reciting that Kalra fails to disclose at least the elements of Claim 47 (with which Applicants agree) and is relying on Buxton to remedy this failure of Kalra. Applicants believe, however, that the above discussion may reflect a misunderstanding of what is disclosed in the cited portions of Buxton and that Buxton fails to remedy the shortcomings of Kalra.

The cited portions of Buxton read as follows. Column 3, lines 21-50 reads:

Generally, digital content may be transmitted in three different formats. First, the content may be transmitted "in the clear", that is, in unedited and unmasked form as originally authored. FIG. 2 shows content transmitted "in the clear", without any masking being applied to it. In FIG. 2, the content is shown as being distributed in a continuing stream of data portions or packets. A variation on this format is shown in FIG. 3, where the content is transmitted unobfuscated and a mask is sent along with the original content, thereby allowing any element in a distribution hierarchy to apply the mask to the content to obfuscate selected portions of the content according to the specifications of the mask. Second, the content may be transmitted with a mask already applied to it to generate "content after mask applied" (CAMA) data. This modified content may have had objectionable or sensitive data or information masked so that the objectionable or sensitive data or information cannot be perceived by the end-user. FIG. 4 shows content after the mask has been applied as a selected portion of a content stream. Third, the content may be transmitted in "content after mask applied" (CAMA) format, but the transmission of data may also include the masked content after encryption has been performed. FIG. 5 shows a portion of content after the mask has been applied along with the encrypted masked content in a transmission stream. The encryption may be performed using any suitable cryptographic process. This may prevent unauthorized receivers from reconstructing the original content. By using encryption, the content transmitted through open channels to existing, untrustworthy receivers may still be protected.

Buxton at col. 3, lines 21-50. This passage addresses the different modes in which content may be transmitted. It does not address the conditions under which each mode is used, other than,

perhaps, “unauthorized receivers.” However, the determination of whether or not a receiver is unauthorized is not discussed.

Column 5, line 17 to column 6, line 43 reads:

Receivers form the final destination of content among the components of the system. Receivers 18, 20, and 22, receive and render the digital content, either original content or obfuscated content. Rendering may comprise displaying text, images, and video, and generating audio signals. A receiver may comprise a digital television, a set-top box, a personal computer (PC), a satellite receiver, a personal digital assistant (PDA), or other device for receiving and rendering multimedia signals. Trusted receivers may perform masking operations locally, while untrusted receivers may require content to be masked upstream in the distribution hierarchy and prior to reception. User authentication may be employed to obtain the correct identification of a target audience or end-user at a receiver's location. For example, a pass code or personal identification number (PIN) may need to be entered into the receiver in order to have the receiver render original content, or to select an appropriate level of masking. Other user authentication techniques may also be used.

With the present invention, the audience (determined individually, via other members of an audience such as parents or corporate management, or via third parties such as governmental regulatory groups) can influence or control the selection or absence of masks by directly influencing the application of masks at each stage of the distribution hierarchy. As shown in FIG. 1, for some receivers, the resulting rendered content may be without obfuscation 30, but for other receivers, the rendered content may be with obfuscation 32, 34.

At each stage of the content authoring and distribution system of the present invention, system entities decide how to transmit the content. An entity may transmit the original content only, transmit the original content and associated mask for future application of the mask, apply the mask to the content and transmit the CAMA data only, or apply the mask to the content and transmit the encrypted masked content separately from the CAMA data, so that a downstream entity may reverse the masking operation if authorized to do so.

In embodiments of the present invention, there are at least two models of distributing content. FIG. 6 is a diagram of a first distribution model according to an embodiment of the present invention. In the first model, the distribution channel for the content is assumed to be trusted. At block 100, a component in the distribution hierarchy (e.g., a broadcaster, broadcasting network, cable head end, local distributor, local station) obtains the content and the mask to apply to the content from an authorized source. The authorized source may be the original content creator or a production company, for example. At block 102, it may be determined if the receiver is trusted. This may be accomplished by any one of

several methods known in the art of authentication. If the receiver is trusted, then the original, unmodified content may be sent over a communications channel at block 104 to a receiver. At block 106, the receiver then renders the content for perception by a user. If it cannot be verified that the receiver is trusted, then the component applies the mask to generate "content after mask applied" (CAMA) data at block 108. The CAMA data is then sent over a communications channel to a receiver at block 110. At block 112, the receiver renders the CAMA data for perception by a user. The user perceives modified or edited content instead of the original content.

FIG. 7 is a diagram of a second distribution model according to an embodiment of the present invention. In the second model, it may not be known if the distribution channel for the content is trusted. At block 150, a component in the distribution hierarchy (e.g., a broadcaster, broadcasting network, cable head end, local distributor, local station) obtains the content and the mask to apply to the content from an authorized source. The authorized source may be the original content creator or a production company, for example. At block 152, it may be determined if the channel is trusted. If the channel is trusted, processing may continue according to the first distribution model as shown in FIG. 6 via connector 6A. If the channel is not trusted, block 154 is performed by the component to apply a mask to generate CAMA data. At block 156, the masked content may be encrypted to protect it from unauthorized access. The masked content is that portion of the content that has been obscured, obfuscated or concealed.

At block 158, it may be determined if the receiver is trusted. If the receiver is trusted, then block 160 is performed. At block 160, the CAMA data, the encrypted masked content, and optionally knowledge of how to reverse the masking operation may be sent on the distribution channel to the trusted receiver. At block 162, the trusted receiver decrypts the masked content and reverses the masking operation to produce the original content. At block 164, the newly regained original content may be rendered by the trusted receiver for perception by the user. If the receiver is not trusted, then the CAMA data may be transmitted to the "untrusted" receiver at block 166. At block 168, this content may be rendered by the receiver for perception by a user.

Buxton at col. 5, line 17 to col. 6, line 43. In contrast with the first passage, this passage addresses authorization. In particular, the only method specifically discussed is "user authentication." Aside from methods in which a user enters "a pass code or personal identification number (PIN)," no specifics are recited.

Column 8, lines 23-47 reads:

Typical existing conditional access systems require content to be obfuscated at the source of the content (e.g., the broadcaster or content creator). With embodiments of the present invention, portions of content may be obfuscated at any level of a content distribution hierarchy. This allows each intermediate distributor to decide whether obfuscation will be performed and to describe how the obfuscation will be performed. This feature is made possible with the present invention because both the content and the masks are in digital form and can be manipulated losslessly, and because the masks may be coupled to the digital content via software links or pointers. Thus, the present invention allows distributors to determine whether customers are authorized to receive original, unedited content or whether the customers should receive edited content. For example, a distributor may in effect broadcast multiple versions of a movie with ratings NC-17, R and PG-13 over the digital content distribution system to trusted receivers. Different masks may be transmitted along with the original content. The masks may be in conformance with the Motion Picture of America Association (MPAA) movie rating system. Depending on the characteristics of the receiver and the authenticated identity of the user, the receiver may apply different masks to the original content to produce selected ones of the different versions.

Buxton at col. 8, lines 23-47. Similar to the first passage, this passage only addresses different modes of content transmission, merely mentioning “trusted receivers.”

In order to address what is recited in Claim 47, Buxton would have to establish that “a data profile of the target equipment,” which is being accessed, “includes an identification of rights of a user to access content of the original audio stream.” These passages from Buxton fail to do so (and Applicants have found no other passages, in either Kalra or Buxton, that would address this).

In particular, Buxton mentions nothing whatsoever that may correspond to a data profile that would be accessed to obtain “identification of rights of a user to access content.” As mentioned above, the only methods discussed in Buxton involves the entry of user data (PIN or access code, for example, for user identification), rather than accessing of a profile. In other words, there is no method discussed in Buxton that appears to be compatible with accessing of a data profile as recited in the claim language, and there is no mention of anything corresponding to a data profile.

For at least these reasons, it is respectfully submitted that the cited references do not support rejections of Claims 43, 47, 56, 57, and 64 and Claims 44-46, 49, 53, 63, 65, 66, and 69, which depend from these claims, under 35 U.S.C. § 103.

Claims 48, 50-52, 58 and 59 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kalra et al. in view of Buxton, and in further view of U.S. Patent No. 7,290,057 to Saunders et al. (hereinafter “Saunders”). This rejection is respectfully traversed.

Claims 48, 50-52, 58, and 59 all depend from either Claim 43 or Claim 56. Therefore, the above reasons pertain to these claims, as well, and the cited references fail to support rejections of Claims 48, 50-52, 58, and 59 under 35 U.S.C. § 103 for at least these same reasons.

Claims 54 and 60 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kalra et al. in view of Buxton, and in further view of U.S. Patent No. 6,938,270 to Blackketter et al. (hereinafter “Blackketter”). This rejection is respectfully traversed.

Claims 54 and 60 depend from either Claim 43 or Claim 56. Therefore, the above reasons pertain to these claims, as well, and the cited references fail to support rejections of Claims 54 and 60 under 35 U.S.C. § 103 for at least these same reasons.

Claims 55 and 61 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kalra in view of Buxton, and in further view of U.S. Patent No. 6,807,542 to Bantz (hereinafter “Bantz”). This rejection is respectfully traversed.

Claims 55 and 61 depend from either Claim 43 or Claim 56. Therefore, the above reasons pertain to these claims, as well, and the cited references fail to support rejections of Claims 55 and 61 under 35 U.S.C. § 103 for at least these same reasons.

Claim 62 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kalra et al. in view of Buxton, and in further view of U.S. Patent Application Publication No. 2002/0064285 to DeLeon (hereinafter “DeLeon”). This rejection is respectfully traversed.

Claim 62 depends from Claim 56. Therefore, the above reasons pertain to Claim 62, as well, and the cited references fail to support the rejection of Claim 62 under 35 U.S.C. § 103 for at least these same reasons.

Claims 67 and 68 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kalra et al. in view of Buxton, and in further view of U.S. Patent Application Publication No. 2003/0061239 to Yoon (hereinafter “Yoon”). This rejection is respectfully traversed.

Claims 67 and 68 depend from Claim 64. Therefore, the above reasons pertain to these claims, as well, and the cited references fail to support rejections of Claims 67 and 68 under 35 U.S.C. § 103 for at least these same reasons.

Therefore, Applicants respectfully request that the rejections of the claims under 35 U.S.C. §103 be withdrawn.

Disclaimer

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Office Action. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

CONCLUSION

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

The Office is authorized to charge any necessary fees to Deposit Account No. 22-0185.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 27592-01111-US from which the undersigned is authorized to draw.

Dated: April 9, 2010

Respectfully submitted,

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